Application No.: 09/592,907 Attorney Docket No. 051481-5050 Page 5 of 7

REMARKS

The Office Action dated 3 March 2003 has been reviewed. Claims 21 and 25 have been amended. Claims 7-16 and 21-26 remain pending and are submitted for reconsideration. No new matter has been added.

Claims 25 and 26 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way to reasonably convey to one skilled in the relevant art that the inventor, at the time the Application was filed, had possession of the claimed invention. Applicant respectfully traverses this rejection. However, solely in the interest of expediting prosecution, claim 25 has been amended so as to render moot the allegation.

Claims 21-24 and 11-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,649,687 to Rosas et al. (Rosas) in view of U.S. Patent No. 4,362,185 to Kadner. Claims 7-10 and 14-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosas in view of Kadner, and further in view of U.S. Patent No. 4,002,318 to Koch. These rejections are respectfully traversed in view of the above amendments and the following comments.

Independent claims 21 and 25 each recite combinations of features that include "a pin extending along a longitudinal axis and having a first portion at least partially surrounded by the bobbin and adjacent a second portion, the first portion having a first cross-sectional area greater than a second cross-sectional area of the second portion, the first cross-sectional area being non-decreasing in a direction toward the second portion along the longitudinal axis, and the pin being displaceable along the longitudinal axis with respect to the bobbin when an electric current flows through the wire." Support for these features is found, for example, in Figure 5 as originally filed, which shows that the cross-sectional area of the second portion does not decrease as the first portion approaches the second portion.

It is respectfully submitted that the applied prior art fails to teach or suggest the combinations of features recited in independent claims 21 and 25.

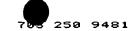
The Office Action acknowledges that Rosas "does not show a second, reduced diameter portion of the valve head received in and 'occluding' the aperture." In an attempt to overcome this deficiency, the Office Action relies upon Kadner for a showing of "a reciprocating valve

Application No.: 09/592,907 Attorney Docket No. 051481-5050 Page 6 of 7

with a second portion of reduced cross section occluding the aperture." However, Kadner shows a smaller cross-sectional area button 15 that is connected to a larger cross-sectional area surface 14 via a peripheral groove 16. With particular reference to Kadner's Figure 2, the peripheral groove 16 includes a first tapered portion 19 and a second tapered portion 21, both of which illustrate a decreasing cross-sectional area of the button 15 as it approaches the surface 14.

Thus, it is respectfully submitted that Rosas and Kadner, whether considered individually or in combination, fail to teach or suggest the combinations of features recited in independent claims 21 and 25, and that these claims are allowable over the applied prior art. Claims 11-13, 22-24 and 26 ultimately depend from one of independent claims 21 and 25, and are respectfully submitted to also be allowable for at least the same reasons, as well as for the additionally recited features that further distinguish over the applied prior art.

The Office Action relies on Koch to allegedly suggest pin and pin calibration features as recited in claims 7-10 and 14-16, which the Office Action acknowledges are not taught or suggested by Rosas and Kadner. However, Koch fails to overcome the deficiencies of Rosas and Koch as discussed above. Therefore, it is respectfully submitted that claims 7-10 and 14-16, which ultimately depend from independent claim 21, are respectfully submitted to also be allowable for at least the same reasons as claim 21, as well as for the additionally recited features that further distinguish over the applied prior art.



Application No.: 09/592,907 Attorney Docket No. 051481-5050 Page 7 of 7

CONCLUSION

It is respectfully submitted that the application in now in condition for allowance and an early notification of such is earnestly solicited. Should the Examiner feel that there are any issues outstanding after consideration of this reply, the Examiner is invited to contact Applicant's undersigned representative to expedite the prosecution.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted, MORGAN, LEWIS & BOCKIUS LLP

Reg. No. 35,035

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